REMARKS

Applicants acknowledge that the outstanding Office Action dated April 7, 2005 has been made final. Accordingly, a Request for Continued Examination has been submitted herewith, together with the appropriate fee. Further examination of this application is therefore requested, based on the amendments set forth above and the Remarks set forth hereinafter.

Applicants acknowledge the allowability of the subject matter of Claim 9, as set forth in item 5 of the Office Action, as page 4. In particular, the latter claim would be allowable if rewritten in independent form. However, for the reasons set forth hereinafter, Applicants respectfully submit that Claim 9 is allowable in its present dependent form.

The present invention is directed to a method of operating a package switch, for use in data transfer in accordance with a standard protocol, such as the Internet protocol, in which data are transferred in variable size portions, referred to as packets. A packet switch in this context is a device for accepting incoming packets, temporarily storing them, and forwarding them to another part of a data network. Such a packet switch includes a plurality of "ingress means", a plurality of "egress means", a back plane device known as a cell-based cross-bar and a controller. The cross-bar is connected between the ingress means and the egress means to transfer multicast and unicast data from the ingress means to the egress means, under control of the controller.

According to the invention, where the data are to be multicast, the step of invoking a multicast schedule includes forming a multicast cell fan-out table containing current fan-out requirements for a cell at the head of a multicast queue in each ingress means. (The fan-out of a multicast packet is defined as the set of egress ports to which the packet must be replicated.) Eligible bits are then set for multicast cells which are currently allowed to be scheduled, and a priority is determined for each ingress means for sending the calls. In particular, as recited in Claim 1, "the step of determining the priority for each ingress means is based on a combination of send opportunities of the ingress means". Applicants respectfully submit that the latter feature is neither taught nor suggested by the cited references.

According to the present invention, each ingress has a predetermined set of send opportunities, as illustrated in Figure 1a and in Table 1 on page 7 of the specification. Such send opportunities are scheduled in the free cell cycles, as shown in Table 2, which may result in the delay of some of the cells in order to fit into the "free cells". The ingress channels are serviced in numerical order, with delays being introduced where necessary, such that only one ingress is allowed to send in any cycle. In some instances, such as in cycle 12, it is necessary for two ingress channels to be scheduled on the same cycle, in order to avoid either of them clashing with its next available send opportunity.

In the example of Table 2 (page 7), ingress line 1 is given priority, and sent first, because a delay of a single cycle would mean one send opportunity of ingress line 1 clashing with another. (See specification, page 7, lines 15-17.) Ingress line 0 receives a lower priority, since it may be possible to delay its send opportunity, without clashing with its next send opportunity. Thus, a higher priority is assigned to ingress line 1 because it has consecutive send opportunities, while ingress line 0 does not and a delay in ingress line 1 can be accommodated in one of its non-"send" cycles.

According to the specification, the ingress line 1 has top priority, and ingress line 0 has second priority. This corresponds to the proposition that ingress line 1 has one group of three and one pair of adjacent send opportunities while ingress line 6 has two pairs of adjacent send opportunities, and the remaining ingress lines have fewer, if any, sets of adjacent send opportunities.

As can be seen from the foregoing discussion, the phrase "combination of send opportunities" originally included in Claim 5, and now incorporated into Claim 1, refers to a comparison of the relative number of sets of adjacent send opportunities, as well as the size of such sets. Such an arrangement is not disclosed in the cited references. (See specification, page 7, lines 10-18.)

In addition, a new Claim 11 has been added, which further specifies the process by which the send opportunities of the plurality of ingress means are combined into a multicast schedule, and the manner in which the priority is

determined for each ingress means associated with the stacked send priorities. In particular, Claim 11 recites that

> "Each ingress means has a rate associated with multicast traffic, said rate being represented as a send opportunity every fixed number of cell periods, the send opportunities of the plurality of ingress means being combined into a multicast schedule by placing a send opportunity on the next free cell cycle unless it would overlap with the next send opportunity for the same ingress means, and in the case of a potential such overlap, stacking multiple send opportunities in a single cell cycle; and

> a priority is determined for each ingress means associated with the stacked send priorities, based on the combination of send opportunities in the multicast schedule."

These additional limitations are supported by the specification at page 6, line 11 to page 7, line 19. Applicants respectfully submits that Claim 11 distinguishes over the references of record, for the reasons noted previously with regard to Claim 1, and because the additional details incorporated in Claim 11 are not taught nor suggested by any of the cited references.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general,

a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #3036/49955).

Respectfully submitted,

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